

NOTES ON THE GENUS *LYCASTE* GISTL, AND RESURRECTION OF  
*CALLICOLASPIS* BECHYNÉ  
(COLEOPTERA: CHRYSOMELIDAE: EUMOLPINAE)

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*Abstract.*—*Prionodera metallica* Jacoby is a **new synonym** of *Lycaste trichoa* Gistl. The genus *Lycaste* Gistl is redescribed and restricted to the species *L. trichoa* and *L. eumolpoides* (Lefèvre). The genus *Callicolaspis* Bechyné is resurrected for the remaining species formerly placed in *Lycaste*.

*Key Words:* Chrysomelidae, Eumolpinae, *Lycaste*, *Prionodera*, *Callicolaspis*

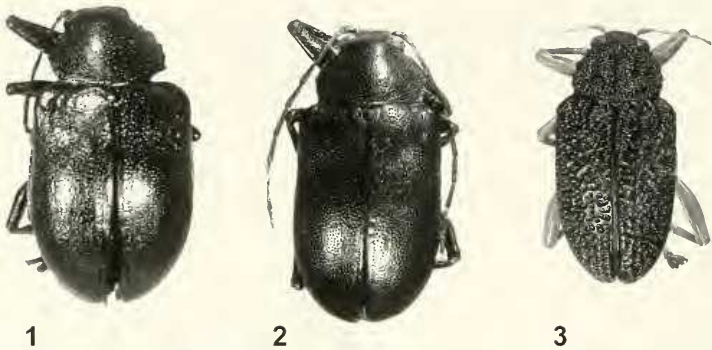
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During a review of type specimens of the Eumolpinae genus *Prionodera* Chevrolat, I discovered that the holotype of *Prionodera metallica* Jacoby was not congeneric with either the type species of *Prionodera* (*P. bicolor* [Olivier]), or with any of the other known *Prionodera* species. The specimen, now in the Bowditch Collection at the Museum of Comparative Zoology, Harvard University, looks like a very large and brilliantly colored member of the widespread New World genus *Colaspis*. However, the specimen, a female, possesses a pair of long curved spines on the apical abdominal sternum which were unlike anything I had seen in any other Neotropical eumolpine genera. It was not until I visited the Frey Collection in the Naturhistorisches Museum in Basel—almost a decade after first studying the Jacoby type—that a second specimen of this species was seen and its identity established. It is *Lycaste trichoa* Gistl, identified and designated as the type species of *Lycaste* Gistl by Monrós and Bechyné (1956).

Bechyné (1950) erected the genus *Callicolaspis* for three large, showy South American species then placed in *Colaspis* Fabricius, two new species he described in

that paper, and a sixth species described the following year (Bechyné 1951). The only unique character of the genus mentioned in the generic diagnosis was an unusually short apical tarsomere that scarcely surpassed the lobes of the third tarsomere. Later, in their review of genus names of the Chrysomelidae, Monrós and Bechyné (1956) synonymized *Callicolaspis* with *Lycaste*, designated Gistl's (1837) *L. trichoa* as the type species, and gave a brief description of *L. trichoa*. Upon further review of the species currently placed in *Lycaste*, I conclude that Monrós and Bechyné were partly right: *Lycaste trichoa* and *L.* (formerly *Callicolaspis*) *eumolpoides* (Lefèvre) are congeneric, but the remaining four species belong together in a different genus, for which *Callicolaspis* Bechyné is the available name.

Jacoby's (1884) original description and the notes in Monrós and Bechyné (1956) give an adequate description of the overall shape, color, and punctuation of *Lycaste trichoa*, but they do not mention morphological characters that separate *Lycaste* species from other Neotropical Eumolpinae. In the descriptions given below, terminology of



Figs. 1–3. Dorsal views of *Lycaste* and *Callicolaspis*. 1, *L. trichoa*. 2, *L. eumolpoides*. 3, *C. heros*.

the genitalia follows Flowers (1995, 1999) and Askevold and Flowers (1994); terminology of the prothorax follows Selman (1963). Abbreviations for collections in which specimens are deposited are ENP, Escuela Nacional Politecnica, Quito, Ecuador; MCZ, Museum of Comparative Zoology, Harvard University, Cambridge, MA; NHMB, Naturhistorisches Museum, Basel, Switzerland; PUCE, Pontificia Universidad Catolica de Ecuador, Quito, Ecuador.

*Lycaste* Gistel 1837:404

Type species.—*Lycaste trichoa* Gistel 1837:404, designated by Monrós and Bechyné (1956)

Description.—Body elongate-oval, dorsally convex; length 11.5–13.4 mm; head, pronotum, elytra, underside, and legs dark blue, bright blue, or metallic green. *Head*: Clypeus coarsely punctate with sparse setae, punctures separated by distance less than the diameter of a puncture, surface between punctures smooth, apex of clypeus weakly emarginate. Frons finely to coarsely punctate; antennal calli smooth, swollen. Eyes oval, broadly emarginate at antennal insertion; ocular sulci weakly developed. *Antenna*: Scape elongate oval, pedicel subglobose, shorter than scape, distinctly shorter than flagellomere 1; flagellum filiform, each antennomere slightly wider at

apex, elongate; antennomeres 3–6 with scattered appressed setae, antennomeres 7–11 densely pubescent, with whorl of long erect setae at apex of antennomeres 3–10; antennomere narrowly 11 spindle-shaped. *Mouthparts*: Labrum with apex strongly emarginate, with two dorsal setae and short row of lateral setae along outer margin. Mandible with outer margin with sharp bend, lateral surface smooth with scattered punctures and setae, apical teeth broad, pointed. Maxillary palpus with apical palpomere tapered or bluntly rounded. *Prothorax*: Distinctly wider than long; pronotum moderately convex, with posterior margin subequal to somewhat longer than anterior margin; basal marginal bead present, obsolete at middle; lateral margin narrowly undulate, forming three broad shallow teeth; with widest part of pronotum at or anterior to middle; disc coarsely regularly punctate. Undersurface of thorax smooth or alutaceous. Prosternum with long setae, weakly concave between fore coxae, expanded behind coxae; posterior margin of intercoxal process truncate, posterolateral angles weakly swollen. Lateral arms of prosternum with anterior margin straight, junction with prosternum continuous; surface densely setose, proepimeron weakly concave. *Mesosternum*: Subequal in width to prosternum, convex between coxae, flat

on anterior face; surface punctate, with sparse short yellow setae. *Metasternum*: Convex, swollen anterior to hind coxae, weakly concave between coxae, transverse-ly wrinkled, with sparse short yellow setae; metepisternum gradually narrowed posteriorly, with surface alutaceous. *Legs*: Sparsely covered with short prostrate setae; all surfaces alutaceous. Trochanters with strong seta on apical angle. Femora swollen in middle, tibiae multicarinate, slightly to moderately sulcate between carinae, with setae increasing in length toward apex of tibiae. Tarsi densely and uniformly pilose beneath; basal pro- and mesotarsomere distinctly longer than wide; second tarsomere broadly triangular, with acute apicolateral angles; third tarsomere longer than second, deeply bilobed; terminal tarsomere distinctly surpassing apex of third tarsomere; claws divergent, appendiculate. *Elytra*: Densely punctate; punctures confused or in irregular rows; humerus prominent, rounded; basal callus weakly to well developed; postbasal depression strong, deeper laterally. Sides subparallel or convex, convergent; apices conjointly rounded. Epipleuron narrow, acutely raised, slanted, tapering evenly from base to apex. *Scutellum*: U-shaped, with base shorter than length; surface smooth. *Abdomen*: with all segments subequal in length, surface of segments alutaceous. Sterna sparsely covered with short setae, setae longer laterally. Sternum VII of female with depressions along lateral margins and with apical margin bearing two submedian curved teeth and a median bidentate projection, and with long setae on apical margin. *Pygidium* (Figs. 8-9): Deep longitudinal groove on strongly raised central area; pygidial surface smooth, lateral margins smooth. *Female genitalia*: Segments VIII-XI forming elongate ovipositor (Fig. 14). Sternum VIII with long rod-like basal apodeme (Fig. 14, A8) and weak linear apicolateral arms (ALA) present or absent, with several setae, dorsal sclerites (DS) moderately sclerotized and widened apically with lateral branch at mid-length.

Sternite IX with hemisternites (HS) with long basal rods, and paraprocts separated into a pair of long dorsal rods, apically forming hood-like projection above genital orifice (Fig. 15); baculum (B) distinct, subapical, subequal in length to gonocoxae (GC). Gonocoxae narrow, elongate, with long setae apically and laterally. Spermatheca (Figs. 17, 20) with receptacle wider than pump, duct sclerotized and forming convoluted mass at receptacle.

Remarks.—*Lycaste* can be distinguished from other Neotropical eumolpine genera by the following combination of characters: 1) Presence of curved spines on the female subgenital plate; 2) large size; 3) smooth elytra; and 4) appendiculate claws.

#### KEY TO SPECIES OF *LYCASTE*

1. Elytra bright metallic green; elytral punctures striate at apex . . . . . *trichoa* Gistel
- Elytra dark blue; densely punctate, non striate throughout . . . . . *eumolpoides* (Lefèvre)

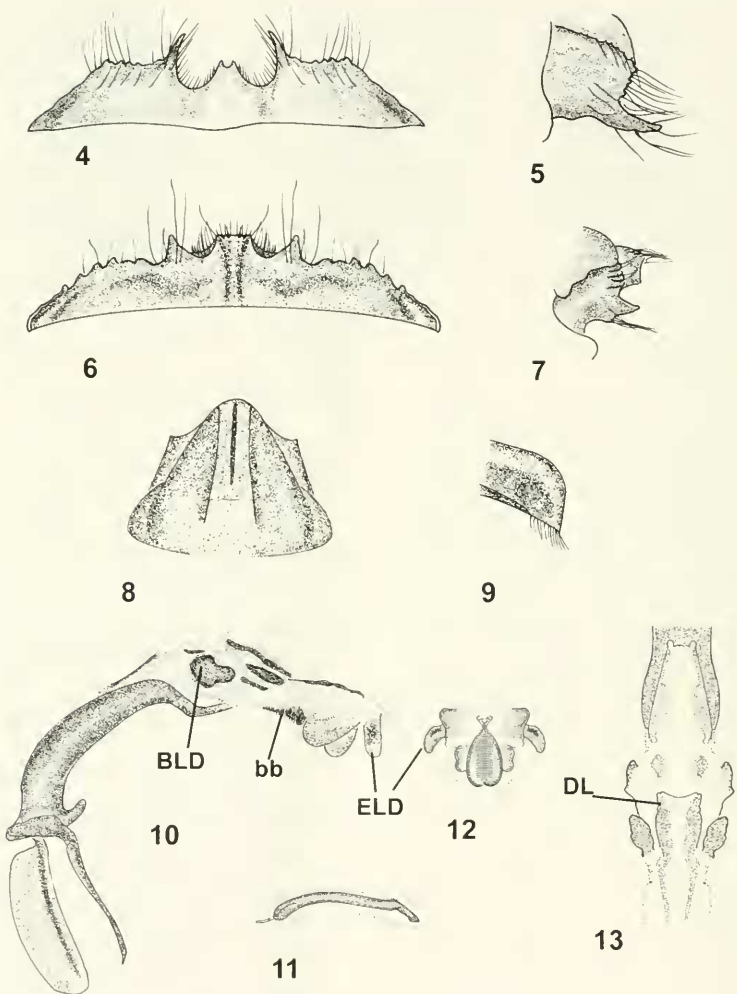
#### *Lycaste trichoa* Gistel (Figs. 1, 4-5, 14-17)

*Lycaste trichoa* Gistel 1837:404

*Prionodera metallica* Jacoby 1884:128.

#### New synonymy.

Female.—Body elongate-oval, dorsally convex; length 12.7 mm. Head and pronotum bright metallic blue-green, elytra metallic golden green; antenna reddish brown with green reflex. Underside and legs metallic green. Surface between punctures of head with clypeus smooth. Frons coarsely punctate, punctures separated by distance greater than the diameter of a puncture; surface between punctures smooth, shining; vertex with median impressed line. Prothorax distinctly wider than long, L/W = 0.58, pronotum moderately convex, with posterior margin somewhat broader than anterior margin; anterior angles acute, directed anterolaterally, posterior angles acute; widest part of pronotum at middle; disc coarsely, densely punctate, with punctures separated by a distance greater than their own diameters; surface between punctures smooth,



Figs. 4-13. Abdominal and genital characters of *Lycaste*. 4-5, Sternum VII of *L. trichoa*. 4, Ventral view. 5, Lateral view. 6-7, Sternum VII of *L. eumolpoides*. 6, Ventral view. 7, Lateral view. 8-9, Pygidium of *L. eumolpoides*. 8, Dorsal view. 9, Lateral view. 10-13, Male genitalia of *L. eumolpoides*. 10, Median lobe and partly everted endophallus. 11, Apical sclerite. 12, Apical view of endophallic lateral digits. 13, Dorsal view of basal part of endophallus. Abbreviations: bb = basal setal field, BLD = basal lateral digit, DL = dorsal lobe, ELD = endophallic lateral digit.

shining, with numerous punctulae. Undersurface of pronotum alutaceous. Prosternum coarsely punctate. Lateral arms of prosternum with surface densely setose. Mesosternum with surface strongly punctate. Metasternum shallowly wrinkled. Femora moderately swollen in middle. Elytron finely punctate, with punctures tending to form irregular rows on disc and in apical fourth, punctures separated by distance greater than the diameter of a puncture. Surface between punctures smooth with numerous small punctulae; width across humeri  $1.3 \times$  width across pronotum, a pair of low basal costae between humerus and basal callus; basal callus well developed; postbasal depression strong, deeper laterally. Sides broadly rounded, convergent. Basal margin costate to scutellum. Abdomen with short appressed setae and surface of segments alutaceous. Sternum VII (Figs. 4–5) with a bidentate projection in center flanked by two slender incurving spines. Sternum VIII with basal apodeme elongate, rodlike, abruptly widened and weakened apically; apicolateral arms obsolete; two groups of setae apically; dorsal sclerites (Fig. 16) moderately developed, weaker and broader apically, with small recurved lateral branch at mid-length. Spermatheca (Fig. 17) with receptacle wider than pump; duct well sclerotized, contorted into a small, loose mass just beyond receptacle.

Male.—Unknown.

Specimens examined.—BRAZIL: 1 ♀ (NHMB), Brazil: Amazonas, Maués; 1 ♀ (MCZ), Amazonas/1<sup>st</sup> Jacoby Coll./Type/ (red MCZ type label) Type 9494.

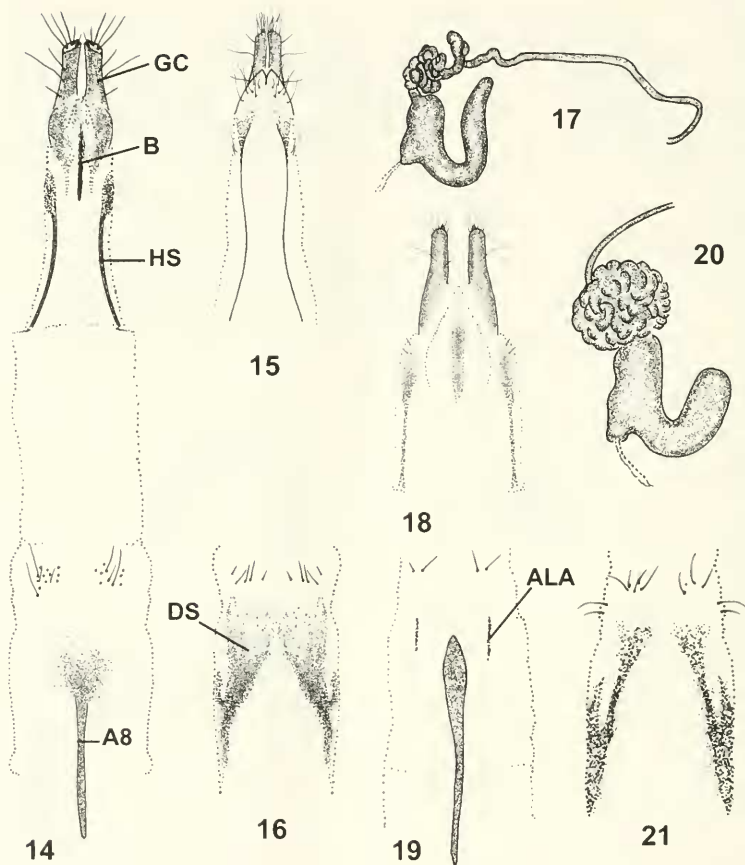
*Lycaste eumolpoides* (Lefèvre)  
(Figs. 2, 6–13, 18–21)

*Colaspis eumolpoides* Lefèvre 1877:136.

*Callicolaspis eumolpoides*: Bechyně 1950: 276.

Male.—Length 11.5 mm. Head metallic green, pronotum and elytron dark blue; antenna with antennomeres 1–4 yellowish

brown, washed with blue green dorsally, 5–11 piceous. Underside blue black, legs and tarsi piceous with shining blue reflex. Head with frons finely punctate, punctures separated by distance less than the diameter of a puncture; surface between punctures weakly granulate. Antenna with all segments slightly flattened. Mouthparts piceous; labrum yellowish brown. Prothorax distinctly wider than long, L/W = 0.6; anterior angles blunt, directed laterally, posterior angles obtuse; disc with punctures separated by a distance less than their own diameters; surface between punctures microreticulate, shining, with dense punctulae. Undersurface of thorax smooth. Ventral part of prosternum with evenly scattered large punctures, with surface wrinkled, shiny. Mesosternum with marginal beads along lateral edges, surface rugosely punctate, with sparse short yellow setae. Femora swollen in middle. Mesocoxa with a small right-angled tubercle near articulation point. Protibia flattened dorsally, evenly expanded to apex, apical margin rounded; middle and hind tibiae widened apically. Elytron densely punctate throughout, surface between punctures densely micropunctate; humeri prominent, rounded, width across humeri  $1.3 \times$  width across pronotum; basal calli weakly developed; postbasal depression shallow. Sides subparallel, convergent. Epipleuron tapering evenly from base to apical one-eighth. Abdomen with all segments subequal in length, each segment with long fine setae on apical half. Surface of segments alutaceous. Sternum VII with lateral margins smooth, a weak depression in center. Median lobe of aedeagus (Fig. 10) in lateral view curved; apex bent sharply; basal hood long, lightly sclerotized, with apodemes distinct at lateral margins of hood; subbasal fenestra present; basal spurs prominent; basal part of endophallus (Figs. 10, 12–13) with sclerotized basal (BLD) and endophallic lateral digits (ELD), additional dorsal and lateral sclerites, dorsal lobe (DL) elongate and truncate at apex, basal setal



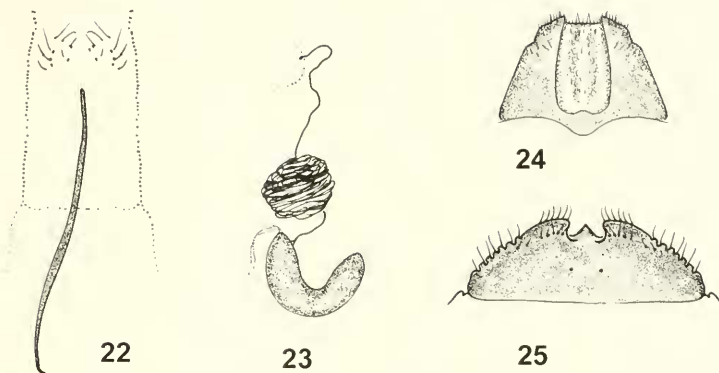
Figs. 14-21. Female characters of *Lycaste*. 14-16, Ovipositor of *L. trichoa*. 14, Ventral view. 15, Dorsum IX. 16, Dorsum VIII. 17, 20, spermatheca. 17, *L. trichoa*. 20, *L. eumolpoides*. 18-19, 21, Ovipositor of *L. eumolpoides*. 18, Dorsum IX. 19, Sternum VIII. 21, Dorsum VIII. Abbreviations: A8 = apodeme of sternum VIII, ALA = apicolateral arm of sternum VIII, B = baculum, DS = dorsal sclerites of segment VIII, GC = gonocoxae. HS = hemisternites of segment IX.

field (bb) present; apical sclerite (Fig. 11) rodlike, well sclerotized.

Female.—Body oval; length 13.4 mm; head, pronotum, elytron and underside dark greenish, antenna and legs as in male. Prothorax distinctly wider than long, L/W = 0.67; pronotum with three broad low teeth

on lateral margin. Width of intercoxal process  $0.75 \times$  diameter of procoxa, broadened behind coxa, posterior margin slightly concave. Mesosternum subequal in width to prosternum, flat, transversely wrinkled between coxae, otherwise similar to male. Legs with basal pro- and mesotarsomeres





Figs. 22–25. Female characters of *Callicolaspis heros*. 22, Sternum VIII. 23, Spermatheca. 24, Pygidium. 25, Sternum VII.

not expanded. Abdomen with all segments subequal in length. Sterna sparsely covered with short setae, setae longer laterally. Sternum VII (Figs. 6–7) with depressions along lateral margins and with apical margin bearing two submedian curved teeth and a median truncate projection, and with long setae on apical margin. Pygidium as in male. Sternum VIII (Fig. 19) with basal apodeme elongate, rodlike, slightly widened apically; apicolateral arms reduced to a pair of fine longitudinal sclerites; four setae apically; dorsal sclerites moderately developed (Fig. 21), weaker and broader apically, with apically directed lateral branch at mid-length; sternum (Fig. 18) and dorsum of segment IX as in *L. trichoa*. Spermatheca (Fig. 20) with duct well sclerotized, twisted into a round compact mass just before attachment to receptacle.

Specimens examined.—BOLIVIA: 1 ♂ (NHMB) (no other data); BRAZIL: 1 ♀ (NHMB) ob Jura, Amazon; ECUADOR: 1 ♂ (ENP) Napo, Sierra Azul (2,500 m), Oct. 95; Bosque de Aliso, Fo. Bersolsa, Col. 1 ♂ (PUCE) Yasuni 250 m, 5–6 Feb. 1997, X Cisneros, ♂ (ENP) Orellana, TBS Río Tiputini, 14–26 feb. 2001, 250 m. A. Lucky; colección manual, Bosque Húmedo Tropical. 1 ♀ Orellana, Yasuni, Onkone-

gare, fogging, 1996-05-(1-30), collect. P. Araujo et al. 1 ♂ same locality, Send. Murcielago 6-IV-2001 Mayer Rodríguez. 2 ♂ same locality, 1/2 km. S. orilla TBS, 07-II-02, Araujo, Ortega, Rosero. 1 ♀ Pastaza, Lorocachi, 220 m 76°09'W 01°39'S, 16–27 Feb. 1996, C. Carpio & M. Ayala.

Remarks.—*Lycaste eumolpoides* can be confused with members of the genus *Longeumolpus* Springlová. Females can be readily separated by the subgenital plate, which is spined in *Lycaste* but not in *Longeumolpus*. The only external difference in the males is the tarsal claws which are appendiculate in *Lycaste* and bifid in *Longeumolpus*.

#### DISCUSSION

The remaining species considered by Bechyné to be in *Lycaste* do not share the characters of the genus and must be removed. Bechyné's original name for these species, *Callicolaspis* Bechyné, is available and is hereby resurrected, with *Colaspis heros* Lefèvre as the type species, designated by Bechyné (1950).

*Callicolaspis* Bechyné 1950: 275  
*cuneiformis* Bechyné 1950: 277  
*guignoti* Bechyné 1951: 301

*heros* (Lefèvre) 1877: 137  
*munifica* (Erichson) 1847: 159  
*ornata* (Jacoby) 1903: 183

Like *Lycaste*, *Callicolaspis* is rare in collections; outside of the Frey Collection, I have seen only a few specimens of *C. heros*. The known species of *Callicolaspis* all have a characteristic coarsely rugose metallic green pronotum and elytra, and contrasting bright orange-yellow legs. The body is elongate and somewhat tapered apically (Fig. 3), the female subgenital plate (Fig. 25) lacks the spines of *Lycaste*, and the pygidium does not have the groove on a raised area (Fig. 24). Internally, the spermatheca, spermathecal duct, and sclerites on segment VIII (Figs. 22–23) show significant differences from both species of *Lycaste*. In dorsal aspect, *Callicolaspis* resembles some of the members of the genus *Adorea* Lefèvre, specifically *A. splendida* (Jacoby), *A. chontalensis* (Jacoby) and *A. bifasciata* (Jacoby), all from Central America. Interestingly, these same *Adorea* species are the only Neotropical Eumolpinae that share with *Lycaste* the character of species specific spines on the female subgenital plate (Flowers, unpublished data).

Given the distinctive appearance of *Lycaste trichoa*, it is curious that Jacoby (1884) considered it a *Prionodera*, a genus that was (and still is) characterized by toothed anterior femora. It should also be noted that I have seen a genuine *Prionodera* species in several museums determined as *Prionodera metallica* by Bechyné. All these specimens are an undescribed species of *Prionodera* closely resembling *P. costata* Baly.

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